

## GD 34 THE DEFINITION OF CLADDING WITHIN THE CONSTRUCTION SECTOR

### 1.0 INTRODUCTION

The word 'cladding' is widely used as a generic term to reference an element, product, assembly or system used within a wall construction. It is important to ensure that the term cladding is used in the correct context in the spoken and the written word and that its use is clarified to ensure that the term is not misrepresented.

As a leading association within the metal building envelope industry, the Metal Cladding and Roofing Manufacturers Association (MCRMA) has set out to define the different meanings for the word 'cladding' when used to describe products, materials and systems for a wall within construction projects.

### 2.0 WALL CLADDING – primarily from metals such as aluminium and steel

A single layer or assembly of various materials which offers a range of functionality that forms a vertical or inclined wall which projects horizontally from the internal environment to the external environment of a building. Elements of the cladding assembly or single layer may be used to provide weather resistance, thermal insulation, structural stability and load carrying capacity and may be adopted to enhance the appearance of buildings and colour coated for aesthetic reasons.

Each element of the cladding assembly or single layer may have exclusive functionality or multiple functionality, depending upon its application, material, use and position within the wall. Single layers or an assembly of materials which form products, assemblies and/or systems should comply with current Building Regulations and all relevant standards, test methods or assessment procedures.

### **3.0 LIGHTWEIGHT CLADDING**

Lightweight cladding is a layer or assembly, which has self-weight and may be subjected to external forces i.e. wind, which is supported by and fixed to an inner self-supporting structure. Examples of this type of cladding used for construction projects include:

- Sandwich panels
- Rainscreen façade systems
- Timber sheathing or lathes
- Metal profile sheeting
- Tensile fabric coverings
- Brick slips

Examples of the use of the word cladding as defined by the MCRMA are given below. In this context, the examples are used to describe products, materials, systems and assemblies manufactured and supplied by member companies for use within the commercial and domestic sectors.

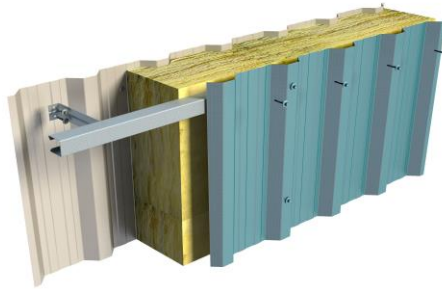
The sector encompasses industrial, commercial, office and warehouse buildings, rural and agricultural buildings, residential and domestic buildings.

### **4.0 SINGLE SKIN**

A one-piece element manufactured from metal, which is profiled (shaped) at the factory to produce a self-supporting sheet used for wall applications. The element has inherent structural strength, can be subjected to external imposed loads i.e. wind, provides a degree of weather resistance and can be supplied with a pre-coated finish to provide durability and aesthetics.

### **5.0 BUILT-UP ASSEMBLY**

A multi element assembly incorporating self-supporting metal inner and outer profiles (shaped), which are produced at the factory and are held apart by a site installed structural support system. The space between the inner and outer profiles is filled with thermally efficient Class A1 mineral fibre insulation.



*Typical trapezoidal twin skin wall system*

The assembly has inherent structural strength, can be subjected to external imposed loads i.e. wind, provides a degree of weather resistance and offers a level of thermal performance. The inner and outer profiles can be supplied with a pre-coated finish to provide durability and aesthetics.

## **6.0 SANDWICH PANELS**

An assembly of various components and materials comprising of metal profiled (shaped) outer and inner skins, which are either adhesively or cohesively bonded, at the factory, to a thermally efficient expanded foam or fibrous core material to provide a wall, skin or assembly.

The composite assembly has inherent structural strength, can be subjected to external imposed loads i.e. wind, provides a degree of weather resistance and offers a level of thermal performance. The inner and outer profiles can be supplied with a pre-coated finish to provide durability and aesthetics.

## **7.0 METAL RAINSCREEN FAÇADE SYSTEM**

An outer panel of water-shedding metal or metal laminated material and the associated materials are attached and supported by bracketry on the outside of the existing façade as in the case of refurbishment or a new structural wall as in the case of new build.

The through wall construction and assembly, which projects horizontally from the internal environment to the external environment of a building can comprise of various and different layers which are made from diverse materials.

The outer layer is designed to shed water, while the inner layers serve multiple functions such as a building's structural wall (existing or new), insulation and extra vapour, breather and weather barriers. The assembly can incorporate a ventilated air cavity that allows any water or moisture that passes into it from either the internal environment of the building or the external environment to drain to the exterior of the building.

The assembly must include site installed fire stops and cavity barriers at pre-determined vertical and horizontal intervals and at the surrounding positions of through wall penetrations to stop the progression of fire



*Typical rainscreen façade system*

The assembly has inherent structural strength, can be subjected to external imposed loads i.e. wind, provides a degree of weather resistance and offers a level of thermal performance and is non-combustible. The outer panels can be supplied self-coloured or with a pre-coated finish to provide additional durability and aesthetics.

## **8.0 HEAVYWEIGHT WALLS (sometimes referred to as cladding if used in the external leaf of a double skin wall)**

A self-supporting layer or assembly, which may be subject to external forces i.e. wind, which transfers self-weight and imposed loads, through its self, to the ground. Examples of this type of heavyweight wall used for construction projects include:

- Brickwork
- Blockwork
- Precast or preformed panels
- Stone
- Light or heavy steel framing systems
- Timber framing systems

MCRMA member companies provide a wide range of building envelope solutions for metal-based roofing and cladding products and services and they can advise on the suitability and performance of materials, systems and assemblies.

Manufacturers are best placed to offer advice about their particular products and any variation from their published data during the design or construction process could result in the component or system failing prematurely or not complying with the guarantee or warranty conditions. In addition, design information can be obtained from any of the independent roofing and cladding inspectors featured on the MCRMA web site.

## DISCLAIMER

Whilst the information contained in this publication is believed to be correct at the time of publication, the Metal Cladding and Roofing Manufacturers Association Limited and its member companies cannot be held responsible for any errors or inaccuracies and, in particular, the specification for any application must be checked with the individual manufacturer concerned for a given installation.

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Tel: 01633 895633 info@mcrma.co.uk www.mcrma.co.uk

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